What is claimed is:

1. A method for the determination of a disease state in a tissue of a human, said method comprising the steps of:

(a) measuring at least one optical property at a first area on said tissue to obtain a first set of data, said first area being subjected to a first temperature program;

(b) measuring at least one optical property at a second area on said tissue to obtain a second set of data, said second area being subjected to a second temperature program, said second temperature program being different from the first temperature program, said second area being morphologically similar to but not substantially overlapping with said first area; and

(c) inserting said first set of data and said second set of data into a mathematical relationship to calculate a mathematical output; and

(d) comparing said mathematical output to a category selector to determine said disease state of said human.

2. The method of claim 1, wherein said optical properties are measured with light having a wavelength ranging from about 400 nm to about 2000 nm.

3. The method of claim 1, wherein said optical properties are measured by a diffuse reflectance technique.

4. The method of claim 1, wherein measuring steps (a) and (b) are performed simultaneously.

5. The method of claim 1, wherein measuring steps (a) and (b) are performed sequentially.

6. The method of claim 1, wherein said temperature programs employ temperatures ranging from about 10 °C to about 45 °C.

7. The method of claim 1, wherein said disease state is selected from the group consisting of diabetic state, dermal disease state, neoplasmic disease state, and vascular disease state.

8. The method of claim 1, wherein said mathematical relationship of step (c) is derived by a method comprising the steps of:

(a) providing a population comprising a sufficient number of human subjects to establish a category selector;

(b) for each of said number of human subjects in said population:

(1) measuring at least one optical property at a first area on said tissue to obtain a first set of data, said first area being subjected to a first temperature program;

(2) measuring at least one optical property at a second area on said tissue to obtain a second set of data, said second area being subjected to a second temperature program, said second temperature program being different from the first temperature program, said second area being morphologically similar to but not substantially overlapping with said first area; and

(c) establishing a mathematical relationship between (i) said optical properties of said first set of data and said second set of data and (ii) said disease state.

9. A method for determining the concentration of an analyte in human tissue, said method comprising the steps of:

(a) measuring at least one optical property at a first area on said tissue to obtain a first set of data, said first area being subjected to a first temperature program;

(b) measuring at least one optical property at a second area on said tissue to obtain a second set of data, said second area being subjected to

a second temperature program, said second temperature program being different from the first temperature program, said second area being morphologically similar to but not substantially overlapping with said first area; and

(c) inserting said first set of data and said second set of data into a mathematical relationship to calculate said concentration of said analyte.

10. The method of claim 9, wherein said optical properties are measured with light having a wavelength ranging from about 400 nm to about 2000 nm.

11. The method of claim 9, wherein said optical properties are measured by a diffuse reflectance technique.

12. The method of claim 9, wherein measuring steps (a) and (b) are performed simultaneously.

13. The method of claim 9, wherein measuring steps (a) and (b) are performed sequentially.

14. The method of claim 9, wherein said temperature programs employ temperatures ranging from about 10 °C to about 45 °C.

15. The method of claim 9, wherein said mathematical relationship of step (c) is derived by a method comprising the steps of:

(a) providing a population comprising a sufficient number of human subjects to establish a statistically meaningful mathematical relationship;

(b) for each of said number of human subjects in said population:

(1) measuring at least one optical property at a first area on said tissue to obtain a first set of data, said first area being subjected to a first temperature program;

(2) measuring at least one optical property at a second area on said tissue to obtain a second set of data, said second area being subjected to a second temperature program, said second temperature program being different from the first temperature program, said second area being morphologically similar to but not substantially overlapping with said first area; and

(c) establishing a mathematical relationship between (i) said optical properties of said first set of data and said second set of data and (ii) said concentration of analyte.

16. The method of claim 9, wherein said analyte is selected from the group consisting of glucose, hemoglobin, hematocrit value, tissue water content, urea, and billirubin.

17. An apparatus for determining a disease state of a human subject or the concentration of an analyte in the tissue of a human, said apparatus comprising:

(a) means for illuminating at least two areas of tissue with light;

(b) means for collecting light re-emitted from said at least two areas of tissue;

(c) means for measuring the intensity of said re-emitted light collected at said two areas of tissue; and

(d) means for controlling the temperature of said at least two areas of said tissue simultaneously by means of temperature programs.

18. The apparatus of claim 17, further including (e) means for correlating the intensity of the re-emitted light collected at said at least two areas of said tissue with said concentration of an analyte or said disease state, provided that said at least two areas are morphologically similar and are substantially non-overlapping.